# Stedman's Medical Dictionary 27th Edition

**carcinoma (CA) , pl .carcinomascarcinomata (kar-si-no'ma, -maz)**

Any of various types of malignant neoplasm derived from epithelial cells, chiefly glandular (adenocarcinoma) or squamous (squamous cell *c.*); the most commonly occurring kind of cancer. [G. *karkinoma,* 1 fr. *karkinos,* 1 cancer, + *-oma,* 1 tumor] Like other malignant neoplasms, carcinomas display uncontrolled cellular proliferation, anaplasia (regression of cells and tissues to a more primitive or undifferentiated state), and a tendency to invade adjacent tissues and to spread to distant sites by metastasis. A carcinoma arises from a single cell whose genome either contains an inherited aberration (oncogene) or has acquired one as a consequence of spontaneous mutation or damage by chemical toxins (carcinogens), radiation, viral infection, chronic inflammation, or other external assault. Probably a complex sequence of biochemical and genetic injuries must take place for a carcinoma to develop. Some carcinomas (e.g., prostate, breast) depend partly on the presence of hormones (androgen, estrogen) for their proliferation. Carcinomas are graded histologically according to evidence of invasiveness and changes that indicate anaplasia, i.e., loss of polarity of nuclei, loss of orderly maturation of cells (especially in squamous cell types), variation in the size and shape of cells, hyperchromatism of nuclei with clumping of chromatin, and increase in the nuclear-cytoplasmic ratio. Carcinomas may be undifferentiated, or the neoplastic tissue may resemble to varying degrees one of the types of normal epithelium. Carcinomas can secrete a variety of hormonelike factors capable of inducing systemic (paraneoplastic) effects (e.g., hypercalcemia, thrombophlebitis). The most common site of origin of carcinoma in both sexes is the skin; the second most common site in men is the prostate and in women the breast. However, the most frequently lethal carcinoma in both sexes is bronchogenic carcinoma. **acinar *c.*** SYN: acinic cell *adenocarcinoma.* **acinic cell *c.*** SYN: acinic cell *adenocarcinoma.* **adenoid cystic *c.*** a histologic type of *c.* characterized by large epithelial masses containing round, glandlike spaces or cysts that frequently contain mucus or collagen and are bordered by a few or many layers of epithelial cells without intervening stroma, forming a cribriform pattern like a slice of Swiss cheese; perineural invasion and hematogenous metastasis are common; occurs most commonly in salivary glands and skin. SYN: cylindromatous *c.*. **adenosquamous *c.*** a type of lung tumor exhibiting areas of clear cut glandular and squamous cell differentiation. **adnexal *c.*** a *c.* arising from sweat or sebaceous glands. **adrenal cortical *c.*** a *c.* arising in the adrenal cortex that may cause virilism or Cushing syndrome. **alveolar cell *c.*** a *c.*, subtype of adenocarcinoma, thought to be derived from epithelium of terminal bronchioles, in which the neoplastic tissue extends along the alveolar walls and grows in small masses within the alveoli; involvement may be uniformly diffuse and massive, or nodular, or lobular; microscopically, the neoplastic cells are cuboidal or columnar and form papillary structures; mucin may be demonstrated in some of the cells and in the material in the alveoli, which also includes denuded cells; metastases in regional lymph nodes, and even in more distant sites, are known to occur, but are infrequent. SYN:

bronchiolar *adenocarcinoma*, bronchiolar *c.*, bronchiolo-alveolar *c.*, bronchioloalveolar *adenocarcinoma*, bronchoalveolar *c.*. **anaplastic *c.*** *c.* with absence of epithelial structural differentiation. **apocrine *c.*** **1.** a *c.* composed predominantly of cells with abundant eosinophilic granular cytoplasm, occurring in the breast or other sites; **2.** a *c.* of the apocrine glands. **basal cell *c.*** a slow-growing, invasive, but usually non-metastasizing neoplasm recapitulating normal basal cells of the epidermis or hair follicles, most commonly arising in sun-damaged skin of the elderly and fair-skinned. SYN: basal cell *epithelioma*. **basaloid *c.*** SYN: cloacogenic *c.*. **basal squamous cell *c.*** SYN: basosquamous *c.*. **basosquamous *c.*, basisquamous *c.*** a *c.* of the skin which in structure and behavior is considered transitional between basal cell and squamous cell *c.* The term should not be used for the much more common keratotic variety of basal cell *c.*, in which the tumor cells are of basal type but which contains small foci of abrupt keratinization. SYN: basal squamous cell *c.*. **bronchiolar *c.*** SYN: alveolar cell *c.*. **bronchiolo-alveolar *c.*** SYN: alveolar cell *c.*. **bronchoalveolar *c.*** SYN: alveolar cell *c.*. **bronchogenic *c.*** originally described only *c.* arising in a bronchus, usually squamous or small cell, but now generally agreed to refer to any lung cancer. Includes squamous or epidermoid, small cell or large cell *c.*, and adenocarcinoma. Observed radiologically as an enlarging lung mass; malignant tumor cells can be detected in the sputum. They metastasize early to the thoracic lymph nodes and to the brain, adrenal glands, and other organs through the bloodstream. **canine *c.*** **1** one of the few transplantable tumors of animals. ***carcinoma* of the breast** a malignant tumor arising from epithelial cells of the female (and occasionally the male) breast, usually adenocarcinoma arising from ductal epithelium.The impact of breast cancer on Western society is enormous. Breast cancer is the most common noncutaneous malignancy in women. A woman's lifetime risk of developing breast cancer is 8%, and approximately 182,000 cases are newly diagnosed each year in the United States. With 46,000 deaths yearly, it ranks second only to lung cancer as a cause of cancer deaths in women. Most breast cancers are estrogen-dependent adenocarcinomas. Many factors, including age, race, family history, and reproductive history, influence a woman's risk of developing breast cancer. The risk rises with advancing age: it is less than 0.1% at age 30, about 2% at age 50, and 10% at age 80. African-American women have the highest mortality and lowest survival rates for breast cancer. Asian women living in the U.S. have the lowest rates, but some studies suggest that their cancer risk increases as they become acculturated. The risk of breast cancer is slightly increased by nulliparity or first pregnancy after age 35 and by early menarche or late menopause. About 10% of breast cancers are induced by inherited genetic mutations (particularly BRCA1 and BRCA2 mutations, which together account for about one-third of familial breast cancers), the rest by spontaneous, non-inherited mutations. The HER-2/neu oncogene, which encodes a 185-kDa transmembrane oncoprotein, is amplified, overexpressed, or both in 10–30% of invasive breast cancers and in 40–60% of intraductal breast carcinomas. Detection of this gene in cancer tissue by fluorescent in-situ hybridization is associated with poor prognosis (30% greater likelihood of recurrence and cancer death). Women with a strong family history of breast cancer tend to develop it at an earlier age and

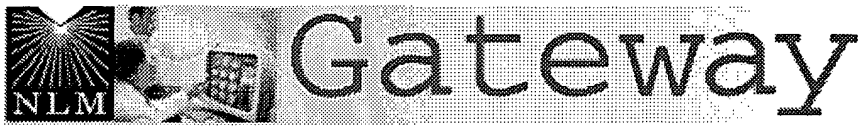
may also be at risk for ovarian and other malignancies. Other risk factors are cigarette smoking, daily alcohol use, exposure to environmental radon, therapeutic and diagnostic radiation including that from mammograms, and possibly estrogen replacement therapy (with or without a progestogen). Preventive, diagnostic, and therapeutic options continue to be vigorously explored. The possibility of identifying inherited oncogenes has generated controversy as to the appropriateness of prophylactic mastectomy for women at risk for early mammary carcinoma. Tamoxifen, an estrogen antagonist used in the treatment of estrogen-dependent breast cancer, has been found effective in reducing the risk for those with strong family history of breast cancer. Authorities recommend annual mammography for all women over 40, and for high-risk women (those with a strong family history of breast cancer and those who have received irradiation treatment for Hodgkin disease) over 25. Because some 10% of breast cancers that can be felt on examination are missed by mammography, annual examination of the breasts by a physician is also recommended. Recent studies have shown no survival advantage for women practicing breast self examination. Treatments for breast cancer include surgical excision, limited or extensive, with or without radical dissection and removal of axillary lymph nodes; irradiation; and chemotherapy, depending on the type and stage of the disease. Limited resection of small invasive tumors, with preservation of the breast, affords survival rates similar to those after modified radical mastectomy. Chemotherapeutic agents in standard use include doxorubicin, epirubicin, cyclophosphamide, and paclitaxel. Trastuzumab, a monoclonal antibody to the HER-2/neu oncogene, shrinks tumors that contain this gene, but its use is associated with a high incidence of cardiac dysfunction. Known or suspected metastases from an estrogen-responsive tumor are treated with tamoxifen or oophorectomy. See Also BRCA1 gene, BRCA2 gene, mammography, tamoxifen. ***carcinoma* of the prostate** a malignant neoplasm arising from glandular epithelial cells of the prostate gland.Prostatic adenocarcinoma (PA) is the most commonly occurring cancer in men, and it ranks second only to lung cancer as a cause of cancer deaths in men. Each year 200,000 new cases are diagnosed in the U.S., and more than 38,000 men die of the disease. Foci of PA are found at autopsy in 40% of men dying after age 50. The neoplasm is androgen-dependent and does not occur in eunuchs. It is both more common and more aggressive in African-American men. A family history of PA, and possibly vasectomy, are other risk factors. PA must be differentiated diagnostically from benign prostatic hyperplasia, which is not a premalignant lesion. PA usually arises in the periphery of the gland and may extend through the capsule into the periprostatic tissues, to seminal vesicles, and regional lymph nodes. At the time of diagnosis, more than 40% of patients have disease that has spread beyond the gland. Bones of the axial skeleton are the usual sites of distant metastasis; the liver, lungs, and brain are other common sites. Early disease is asymptomatic; the diagnosis is most often made by screening of apparently healthy men with digital rectal examination, assay of prostate-specific antigen (PSA), or both. Advanced disease may present as urinary obstruction or bone pain due to metastasis. Men with nodular asymmetry or induration in the prostate gland on digital examination, or elevation of PSA, are evaluated by transrectal ultrasonography of the prostate with ultrasonically directed needle biopsy. Testing for osseous

metastases includes measurement of serum alkaline phosphatase, radionuclide bone scan, computed tomography, and magnetic resonance imaging. PA is graded by the Gleason scoring method, which reflects the degree of histologic differentiation in the two most prominent malignant foci. Anatomic staging is based on extension of the tumor beyond the prostatic capsule, not on tumor size. A low or undetectable level of p27 protein in prostatic tissue is a marker of more aggressive malignancy. Treatment depends on the grade and stage of disease and the age and general condition of the patient. In elderly men and those with concurrent life-threatening illness, benign neglect may be the treatment of choice. Radical prostatectomy (removal of the entire gland along with the seminal vesicles) is generally reserved for patients with early or limited disease and a life expectancy of at least 10 years. This treatment is associated with a substantial risk of urinary incontinence and impotence. Radiotherapy with external beam radiation or transperineal implantation of radioactive isotopes may be employed in addition to or instead of surgery. Androgen blockade by orchidectomy or by administration of estrogen, an androgen antagonist, or a gonadotropin-releasing hormone is palliative in advanced disease. Between 1984 and 1992, the number of cases of AP diagnosed nearly doubled, apparently because of extensive PSA screening. Since 1992 the number of new cases has regressed nearly to its former level. The mortality of PA has declined substantially since 1990. Many observers attribute this decline to the ability of PSA screening to detect cancer at a curable stage. In addition, one large case-control study showed that men dying of PA were one-half as likely as population-based controls to have had a digital rectal examination during the preceding 10 years. Some authorities oppose digital rectal examination and PSA screening of asymptomatic men with life expectancies of less than 10 years, on the grounds that the risks of false-negative results and of adverse consequences of aggressive treatment outweigh any possible benefit in survival or quality of life. **clear cell *c.*** SYN: mesonephroma. **clear cell *c.* of kidney** SYN: renal *adenocarcinoma*. **clear cell *c.* of salivary glands** a malignant tumor, comprising several subtypes such as clear cell oncocytoma, hyalinizing clear cell carcinoma, epithelial-myoepithelial (intercalated duct) *c.*. **cloacogenic *c.*** **1.** a type of squamous cell *c.* of the anus originating in tissues arising from, or in remnants of, the cloaca. **2.** in oncology, anal cancer arising proximal to the pectinate line. SYN: basaloid *c.*, cuboidal *c.*. [cloaca + -genic] **colloid *c.*** SYN: mucinous *c.*. **cuboidal *c.*** SYN: cloacogenic *c.*. **cylindromatous *c.*** SYN: adenoid cystic *c.*. **cystic *c.*** a *c.* in which true epithelium-lined cysts are formed, or degenerative changes may result in cystlike spaces. **duct *c.*, ductal *c.*** a *c.* derived from epithelium of ducts, e.g., in the breast or pancreas. **embryonal *c.*** a malignant neoplasm of the testis or ovary, composed of anaplastic cells with indistinct cellular borders, amphophilic cytoplasm, and ovoid, round, or bean-shaped nuclei that may have large nucleoli; in some instances, the neoplastic cells may form tubular or papillary structures. **endometrioid *c.*** adenocarcinoma of the ovary or prostate resembling endometrial adenocarcinoma. **epidermoid *c.*** squamous cell *c.* of the skin or lung. SYN: epidermoid *cancer*. **epithelial myoepithelial *c.*** **(mi'yo-ep-i-the'le-al)** a salivary gland malignancy composed of an inner layer of ductal cells surrounded by a layer of clear myoepithelial cells.

**fibrolamellar liver cell** *c.* primary hepatic *c.* in which malignant hepatocytes are intersected by fibrous lamellated bands. SYN: oncocytic hepatocellular *tumor*. **follicular** *c.* *c.* of the thyroid composed of well or poorly differentiated epithelial follicles without papillary formation, which is difficult to distinguish from adenoma; the criteria include blood vessel (blood vessel) invasion and the finding of metastases of follicular thyroid tissue in other structures such as cervical lymph nodes and bone; follicular *c.* may take up radioactive iodine. **giant cell** *c.* a malignant epithelial neoplasm characterized by unusually large anaplastic cells. **giant cell** *c.* **of thyroid gland** a rapidly progressive undifferentiated *c.* observed in the thyroid gland, characterized by numerous, unusually large, anaplastic cells derived from glandular epithelium of the thyroid gland. **glandular** *c.* SYN: adenocarcinoma. **hepatocellular** *c.* a malignant tumor composed of neoplastic liver cells; may be well, moderately, or poorly differentiated; secretes &alpha (α)-fetoprotein, which serves as a useful serologic marker. SYN: hepatocarcinoma, liver cell *c.*, malignant *hepatoma*. **Hürthle cell** *c.* a salivary or thyroid *c.* composed of cells that have eosinophilic cytoplasm. SEE ALSO: Hürthle cell *adenoma*. SYN: oncocytic *c.*, oxyphilic *c.*. **inflammatory** *c.* *c.* of the breast presenting with edema, hyperemia, tenderness, and rapid enlargment of the breast; microscopically, there is extensive invasion of dermal lymphatics by the *c.*. **intraductal** *c.* a form of *c.* derived from the epithelial lining of ducts, especially in the breast, where most *c.* arise from ductal epithelium; the neoplastic cells proliferate in irregular papillary projections or masses, filling the lumens, that are solid, cribriform, or centrally necrotic; intraductal *c.* is a form of *c.* in situ as it is contained by the ductal basement membrane; when it invades surrounding stroma or metastasizes it is referred to as ductal *c.*. **intraepidermal** *c.* *c.* in situ of the skin; e.g., Bowen disease. **intraepithelial** *c.* SYN: *c.* in situ. **invasive** *c.* a neoplasm in which collections of epithelial cells infiltrate or destroy the surrounding tissue. **juvenile** *c.* SYN: secretory *c.*. **kangri burn** *c.* SYN: kang *cancer*. **large cell** *c.* an anaplastic *c.*, particularly bronchogenic, composed of cells which are much larger than those in oat cell *c.* of the lung. **latent** *c.* an epithelial neoplasm showing microscopic features of malignancy believed to have remained localized and asymptomatic for a long period; e.g., small *c.* of the prostate in old men, often found incidentally at autopsy. **lateral aberrant thyroid** *c.* obsolete term for a cervical nodule of thyroid *c.* situated outside the thyroid gland, formerly thought to arise from ectopic thyroid tissue but now believed to be metastatic from an occult *c.* within the gland. **leptomeningeal** *c.* SYN: meningeal *c.*. **liver cell** *c.* SYN: hepatocellular *c.*. **lobular** *c.* a form of adenocarcinoma, especially of the breast, where lobular *c.* is less common than ductal *c.* and usually is composed of small cells. **lobular** *c.* **in situ** SYN: noninfiltrating lobular *c.*. **medullary** *c.* a malignant neoplasm, comparatively soft and brainlike in consistency, that consists chiefly of neoplastic epithelial cells, with only a scant amount of fibrous stroma. **medullary** *c.* **of breast** a subtype of breast *c.* composed of sheets of large epithelial cells surrounded by scant fibrous stroma; it is soft and well circumscribed and has a better prognosis than invasive ductal *c.*. **medullary** *c.* **of thyroid** a malignant thyroid neoplasm composed of calcitonin producing C-cells and amyloid rich stroma; it may be sporadic or familial; the familial form may be part of the

multiple endocrine neoplasia syndrome, type 2A and 2B. **meningeal *c.*** an infiltration of *c.* cells in the arachnoid and subarachnoid space; may be primary or secondary. SYN: leptomeningeal *c.*, leptomeningeal *c.*, meningeal *c.*. **metaplastic *c.*** a *c.* in which some of the tumor cells are spindle shaped, suggesting a sarcoma, or in which the stroma shows foci of bone or cartilage; such *c.* occur in the upper respiratory or alimentary tract or in the breast. **metastatic *c.*** a *c.* that has appeared in a region remote from its site of origin, as in metastasis (2). SYN: secondary *c.*. **microinvasive *c.*** a variety of *c.* seen most frequently in the uterine cervix, in which *c.* in situ of squamous epithelium, on the surface or replacing the lining of glands, is accompanied by small collections of abnormal epithelial cells that infiltrate a very short distance into the stroma; this represents the earliest stage of invasion. **mucinous *c.*** a variety of adenocarcinoma in which the neoplastic cells secrete conspicuous quantities of mucin, and, as a result, the neoplasm is likely to be glistening, sticky, and gelatinoid in consistency. SYN: colloid *cancer*, colloid *c.*. **mucoepidermoid *c.*** most commonly a salivary gland *c.* of low grade malignancy composed of mucous, epidermoid, and intermediate cells, with mucous cells abundant only in low-grade *c.* recurrence is frequent, and high-grade *c.* metastasize to cervical nodes. SYN: mucoepidermoid *tumor*. **nasopharyngeal *c.*** a squamous cell *c.* arising from the surface epithelium of the nasopharynx; three histologic variants are recognized: keratinizing, nonkeratinizing, and undifferentiated *c.*. **noninfiltrating lobular *c.*** *c.* of the breast in which small tumor cells fill preexisting acini within lobules, without invading the surrounding stroma. SYN: lobular *c.* in situ, lobular *neoplasia*. **oat cell *c.*** SYN: small cell *c.*. **occult *c.*** a small *c.*, either asymptomatic or giving rise to metastases without symptoms due to the primary *c.*. **oncocytic *c.*** SYN: Hürthle cell *c.*. **oxyphilic *c.*** SYN: Hürthle cell *c.*. **papillary *c.*** a malignant neoplasm characterized by the formation of numerous, irregular, fingerlike projections of fibrous stroma that is covered with a surface layer of neoplastic epithelial cells. **polymorphous low-grade *c.* of salivary glands** a low-grade malignant tumor of salivary glands showing several histologic patterns, such as cribriform, ductal, and papillary growth. SYN: terminal duct *c.*. **primary *c.*** *c.* at the site of origin, with local invasion in that organ. **primary neuroendocrine *c.* of the skin** SYN: Merkel cell *tumor*. **renal cell *c.*** SYN: renal *adenocarcinoma*. **sarcomatoid *c.*** SYN: spindle cell *c.*. **scar *c.*** *c.* of the lung, usually adenocarcinoma, arising from a peripheral lung scar or associated with interstitial fibrosis in a honeycomb lung. SYN: scar *cancer*. **scirrhous *c.*** a hard *c.*, fibrous in nature, resulting from a desmoplastic reaction by the stromal tissue to the presence of the neoplastic epithelium. **secondary *c.*** SYN: metastatic *c.*. **secretory *c.*** *c.* of the breast with pale-staining cells showing prominent secretory activity, as seen in pregnancy and lactation, but found mostly in children. SYN: juvenile *c.*. **signet-ring cell *c.*** a poorly differentiated adenocarcinoma composed of cells with a cytoplasmic droplet of mucus that compresses the nucleus to one side along the cell membrane; arises most frequently in the stomach, occasionally in the large bowel or elsewhere. ***c.* in situ (CIS)** a lesion characterized by cytologic changes of the type associated with invasive *c.*, but with the pathologic process limited to the lining epithelium and without histologic evidence of extension to adjacent structures; the distinctive changes are

usually more apparent in the nucleus, i.e., variation in size and shape, increase in chromatin, and numerous mitoses (including some that are atypical) in all layers of the epithelium, with loss of orderly maturation. The lesion is presumed to be the histologically recognizable precursor of invasive *c.*, i.e., a localized and curable phase of *c.*. SYN: intraepithelial *c.*. **small cell *c.* 1.** an anaplastic *c.* composed of small cells; **2.** an anaplastic, highly malignant, and usually bronchogenic *c.* composed of small ovoid cells with very scanty cytoplasm. SYN: oat cell *c.*. **spindle cell *c.*** a *c.* composed of elongated cells, frequently a poorly differentiated squamous cell *c.* which may be difficult to distinguish from a sarcoma. SYN: sarcomatoid *c.*. **squamous cell *c.*** a malignant neoplasm derived from stratified squamous epithelium, but which may also occur in sites such as bronchial mucosa where glandular or columnar epithelium is normally present; variable amounts of keratin are formed, in relation to the degree of differentiation, and, if the keratin is not on the surface, it may accumulate in the neoplasm as a keratin pearl; in instances in which the cells are well differentiated, intercellular bridges may be observed between adjacent cells. **sweat gland *c.*** usually a solitary tumor, nodular and fixed to the skin and underlying structure, having slow growth for long periods followed by rapid growth and dissemination. **terminal duct *c.*** SYN: polymorphous low-grade *c.* of salivary glands. **trabecular *c.*** SYN: Merkel cell *tumor*. **transitional cell *c.*** SYN: urothelial *c.*. **tubular *c.*** a well-differentiated form of ductal breast *c.* with invasion of the stroma by small epithelial tubules. **urothelial *c.*** a malignant neoplasm derived from transitional epithelium, occurring chiefly in the urinary bladder, ureters, or renal pelves (especially if well differentiated); frequently papillary; these *c.* are graded according to the degree of anaplasia. So-called transitional cell *c.* of the upper respiratory tract is more properly classified as squamous cell *c.*. Transitional cell *c.* is also a rare tumor of the ovary. SYN: transitional cell *c.*. **V-2 *c.*** a transplantable, highly malignant *c.* of experimental animals that developed as a result of malignant change in a virus-induced papilloma of a domestic rabbit. **verrucous *c.*** a well-differentiated papillary squamous cell *c.*, especially of the oral cavity or penis, that may invade locally but rarely metastasizes; the usual cytologic features of malignancy are absent. Genital verrucous *c.* may be associated with pre-existing condyloma acuminatum. **villous *c.*** a form of *c.* in which there are numerous, closely packed, papillary projections of neoplastic epithelial tissue. **wolffian duct *c.*** SYN: mesonephroma. **yolk sac *c.*** SYN: endocervical sinus *tumor*.

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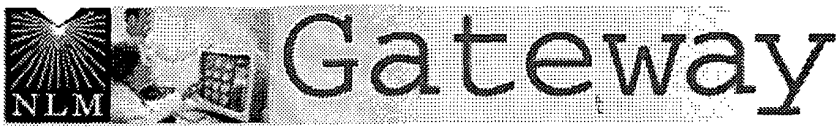
# MeSH Term Information

| | |
|---|---|
| **Heading Mapped To** | *Proteins |
| **Heading Mapped To** | *Serpins |
| **Note** | a serpin with tumor-suppressing activity; expressed in normal human mammary epithelial cells but not in most mammary carcinoma cell lines; amino acid sequence given in first source |
| **Source** | Science 1994 Jan 28;263(5146):526-9 |
| **Registry Number** | 0 |
| **Unique ID** | C085344 |
| **Indexing Information** | Genes, Tumor Suppressor |
| **Name of Substance** | maspin |
| **Concept** | maspin |
| **Concept Id** | C0250870 |
| **Last Revision Date** | 20020703 |
| **Frequency** | 71 |
| **Entry Date** | 19940217 |
| **Pharm. Action** | Antineoplastic Agents |
| **Pharm. Action** | Serine Proteinase Inhibitors |

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## MeSH Term Information

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|---|---|
| **History Note** | 81; was CARCINOMA, EPIDERMOID 1963-80 |
| **Allowable Qualifiers** | BL BS CF CH CI CL CN CO DH DI DT EC EH EM EN EP ET GE HI IM ME MI MO NU PA PC PP PS PX RA RH RI RT SC SE SU TH UL UR US VE VI |
| **Unique ID** | D002294 |
| **Public MeSH Note** | 81; was CARCINOMA, EPIDERMOID 1963-80 |
| **Tree Numbers** | C04.557.470.200.400 |
| **Tree Numbers** | C04.557.470.700.400 |
| **Entry Term** | Carcinoma, Epidermoid |
| **Entry Term** | Carcinoma, Planocellular |
| **Entry Term** | Carcinoma, Squamous |
| **Entry Term** | Carcinomas, Epidermoid |
| **Entry Term** | Carcinomas, Planocellular |
| **Entry Term** | Carcinomas, Squamous |
| **Entry Term** | Carcinomas, Squamous Cell |
| **Entry Term** | Epidermoid Carcinoma |
| **Entry Term** | Epidermoid Carcinomas |
| **Entry Term** | Planocellular Carcinoma |
| **Entry Term** | Planocellular Carcinomas |
| **Entry Term** | Squamous Carcinoma |
| **Entry Term** | Squamous Carcinomas |
| **Entry Term** | Squamous Cell Carcinoma |
| **Entry Term** | Squamous Cell Carcinomas |
| **Concept** | Carcinoma, Squamous Cell |
| **Annotation Note** | /blood supply /chem /second /secret /ultrastruct permitted; coord IM with precoord organ/neopl term (IM) |
| **Concept Id** | C0007137 |
| **Last Revision Date** | 19950608 |
| **Entry Date** | 19990101 |
| **Online Note** | use CARCINOMA, SQUAMOUS CELL to search CARCINOMA, EPIDERMOID 1966-80 |
| **Definition** | A carcinoma derived from stratified squamous epithelium. It may also occur in sites where glandular or columnar epithelium is normally present. (From Stedman, 25th ed) |

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## Cell Lines

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|---|---|---|---|
| **ATCC Number:** | **CRL-1555** Order this item | **Price:** | **$175.00** |
| **Designation:** | A-431 | **Depositors:** | DJ Giard<br>SA Aaronson |
| **Biosafety Level:** | 1 | **Shipped:** | frozen |
| **Medium & Serum:** | See Propagation | **Growth Properties:** | adherent |
| **Organism:** | *Homo sapiens* (human) | **Morphology:** | epithelial<br>PHOTO |

**Tissue:** epidermis; **epidermoid** carcinoma

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| **Comments:** | The **epidermoid** carcinoma cell line A-431, derived from an 85-year-old female, is one of a series of cell lines established from solid tumors by D.J. Giard, et al. [23218] |
| **Tumorigenic:** | yes, forms rapidly growing subcutaneous tumors in immunosuppressed mice and colonies in soft agar |

| | |
|---|---|
| **DNA Profile (STR):** | Amelogenin: X<br>CSF1PO: 11,12<br>D13S317: 9,13<br>D16S539: 12,14<br>D5S818: 12,13<br>D7S820: 10<br>TH01: 9<br>TPOX: 11<br>vWA: 15,17 |
| **Karyotype:** | This is a hypertriploid human cell line. The modal chromosome number was 74 occurring in 36% of cells. The rate of cells with higher ploidies was 1.0%. |
| **Isoenzymes:** | AK-1, 1; ES-D, 1; G6PD, B; Me-2, 0; PGM1, 1; PGM3, 1 |
| **Age Stage:** | 85 years |
| **Gender:** | from female organisms(s) |
| **Propagation:** | ATCC medium:<br>Dulbecco's modified Eagle's medium with 4 mM L-glutamine adjusted to contain 1.5 g/L sodium bicarbonate and 4.5 g/L glucose, 90%; fetal bovine serum, 10%<br>Temperature: 37.0 C |
| **Subculturing:** | Remove medium, and rinse with 0.25% trypsin, 0.03% EDTA solution. Remove the solution and add an additional 1 to 2 ml of trypsin-EDTA solution. Allow the flask to sit at room temperature (or at 37C) until the cells detach.<br>Add fresh culture medium, aspirate and dispense into new culture flasks. |
| **Split Ratio:** | A subcultivation ratio of 1:3 to 1:8 is recommended |
| **Fluid Renewal:** | Every 2 to 3 days |
| **Freeze Medium:** | culture medium 95%; DMSO, 5% |
| **Related Products:** | Recommended medium (without the additional supplements or serum described under ATCC Medium) - ATCC No: 30-2002<br>recommended serum - ATCC No: 30-2020<br>parental cell line - ATCC No: CRL-2592 |
| **References:** | 23093: Faust JB , |

Meeker TC . Amplification and expression of the bcl-1 gene in human solid tumor cell lines. Cancer Res. 52: 2460-2463, 1992. PubMed: 1568216

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## Cell Lines

| | | | |
|---|---|---|---|
| **ATCC Number:** | **CRL-1624** Order this item | **Price:** | **$215.00** |
| **Designation:** | SCC-4 | **Depositors:** | JG Rheinwald |
| **Biosafety Level:** | 1 | **Shipped:** | frozen |
| **Medium & Serum:** | See Propagation | **Growth Properties:** | adherent |
| **Organism:** | *Homo sapiens* (human) | | |
| **Tissue:** | tongue; **squamous** cell carcinoma | | |
| **Cellular Products:** | epidermal keratins; 40 kD keratin | | |

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***Related Cell Culture Products***

| | |
|---|---|
| **Comments:** | SCC-4 forms colonies in semi-solid medium, and is not induced to differentiate by anchorage deprivation. Clonal growth of these cells is improved by using a 3T3 (ATCC CCL-92) feeder layer (see Rheinwald and Green, Cell 6:331, 1975 for methods). |

| | |
|---|---|
| | ATCC grows these cells on 56-X, irradiated STO cells. |
| **Tumorigenic:** | yes, Tumors developed within 21 days at 100% frequency (5/5) in nude mice inoculated subcutaneously with 10(7) cells. |
| **DNA Profile (STR):** | Amelogenin: X,Y<br>CSF1PO: 11<br>D13S317: 11,13<br>D16S539: 12<br>D5S818: 13<br>D7S820: 9,11<br>TH01: 9.3<br>TPOX: 8<br>vWA: 15,17 |
| **Age Stage:** | 55 years |
| **Gender:** | from male organism(s) |
| **Propagation:** | ATCC medium: A 1:1 mixture of Dulbecco's modified Eagle's medium and Ham's F12 medium with 2.5 mM L-glutamine adjusted to contain 15 mM HEPES and 1.2 g/L sodium bicarbonate supplemented with 400 ng/ml hydrocortisone and 10% fetal bovine serum |
| **Subculturing:** | Subculture before confluency.<br>Remove medium, and rinse with 0.25% trypsin, 0.03% EDTA solution. Remove the solution and add an additional 1 to 2 ml of trypsin-EDTA solution. Allow the flask to sit at room temperature (or at 37C) until the cells detach.<br>Add fresh culture medium, aspirate and dispense into new culture flasks. Inoculate new flasks at 3 X 10 exp3 cells per sq. cm. |
| **Fluid Renewal:** | Every 2 to 3 days |
| **Freeze Medium:** | culture medium 95%; DMSO, 5% |
| **Related Products:** | Recommended medium (without the additional supplements or serum described |

| | |
|---|---|
| | under ATCC Medium) - ATCC No: 30-2006 recommended serum - ATCC No: 30-2020 feeder layer cells - ATCC No: 56-X |
| **References:** | 23039: Rheinwald JG , Beckett MA . Tumorigenic keratinocyte lines requiring anchorage and fibroblast support cultures from human squamous cell carcinomas. Cancer Res. 41: 1657-1663, 1981. PubMed: 7214336<br>26113: Rheinwald JG , Beckett MA . Defective terminal differentiation in culture as a consistent and selectable character of malignant human keratinocytes. Cell 22: 629-632, 1980. PubMed: 6160916 |



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